# 9th CLASS CHEMISTRY GUESS PAPER NEW SCHEME 2023.

ALL PUNJAB: Lahore, Gujranwala, Sargodha, Faisalabad, Bhawalpur, Multan, Rawalpindi Azad Kashmir.

## CHAPTER NO. 1 FUNDAMENTALS OF CHEMISTRY.

**KNOWLEDGE BASED QUESITONS.50%**

MCQ'S – 3,4,5,7,8

1. Define industrial chemistry and analytical chemistry.
2. Difference between organic and inorganic chemistry?
3. Give the scope of biochemistry.
4. Differentiate between molecular mass and formula mass.
5. Differentiate between homoatoic and beteroatomic molecules with example.
6. Differentiate between compound and mixture.
7. Difference between Atom and Ion.
8. Difference between Molecule and Molecular ion.
9. Difference between Ions and Free Radicals.

**UNDERSTANDING BASED QUESTIONS.35%**

1. How can you justify that air is a homogeneous mixture Identify substances present in it.
2. How many molecules of water are present in half mole of water?
3. Is the mass of 1 mole of O and 1 mole of S same?

**APPLICATION BASED QUESITONS. 15%**

1. Which branch oe chemistry deals with the structure and properties of naturally accruing molecules.
2. Find out the mass of 3 moles of oxygen atoms.

**LONG QUESTIONS.**

1. Write down the names of different branches of chemistry. Define each. Also write the importance of each branch.
2. Difference between Molecule and gram molecule.

## CHAPTER NO. 2 STRUCTURE OF ATOM.

MCQ'S – 2,3,5,8,9

**KNOWLEDGE BASED QUESITONS.50%**

1. What is the nature of charge on cathode rays?
2. Five Characteristics of cathode rays.
3. Difference between shell and sub shell with example of each.
4. An element has an atomic number 17. How many electrons are present in K,L, and M shells of the atom?
5. For what purpose U-235 is used.
6. A patient has goiter. How it be detected
7. Give three properties of positive rays.
8. What are the defects of Ruther ford's atomic model?
9. Difference between Rutherford's Atomic theory and Bohr's Atomic Theory.
10. Define Isotopes.
11. What is meant by radio carbon dating?
12. How does electron differ from a neutron?
13. Write the isotopes of hydrogen.
14. Write the use of isotopes in radiotherapy.
15. Which is isotopes are used for the treatment of skin cancer.

**UNDERSTANDING BASED QUESTIONS.35%**

1. Do you know any element having no neutrons in its atoms?
2. How was it shown that atomic nuclei are positively charged?
3. How many subshells are there in second shell?
4. What is maximum capacity of a shell?

**APPLICATION BASED QUESTIONS. 15%**

1. Why does an electron first fill 2p orbital and then 3s orbital?
2. Define nuclear fission reaction.
3. U-235 fission produces two atoms of which elements?

**LONG QUESTIONS.**

1. How are cathode rays produced? What are its five major characteristics?
2. How Rutherford discovered that atom has a nucleus located at the centre of the atom.
3. Give the applications of Isotopes in the field of radiotherapy and medicines.
4. What is an isotope? Describe the isotopes of hydrogen with diagram.

## CHAPTER NO. 3 PERIODIC TABLE AND PERIODICITY OF PROPERTIES.

MCQ'S-2,4,6,7,8

**KNWOLEDGE BASED QUESTIONS. 50%**

1. What is the difference between Mandeleev's periodic law and modern periodic law?
2. Define Mandeleev's periodic law.
3. What is meant by periodic function?
4. What is meant by transition elements?
5. Define periodic law of Mosley.
6. Write down two characteristics of long form of periodic table.
7. Define Period and Group
8. What is Shielding effect?
9. What is the trends of shielding effect in a period?
10. Define Ionization energy.
11. Define first and second ionization energy.
12. What is meant by electron affinity?
13. What is meant by electro negativity?

**UNDERSTANDING BASED QUESTIONS. 35%**

1. How Newlands arranged the elements?
2. What do you mean by periodic function?
3. Why the elements are called sorp block elements.

**APPLICATION BASED QUESTION. 15%**

1. Why and how elements are arrange din a period?
2. How many elements are placed in $4^{th}$ period?
3. In which pattern modern periodic table was arranged?
4. Why is it difficult to remove an electron from halogens?
5. Why does the bigger size atoms have more shielding effect?

**LONG QUESTIONS.**

1. Explain the contribution of Mendeleev for the arrangement of elements in his periodic table.
2. Discuss the important feature sof modern Periodic Table.
3. What is Ionization energy? Describe its trends in the Periodic Table?

## CHAPTER NO. 4 STRUCTURE OF MOLECULES.

MCQ'S- 4,7,8,10,12,13,14,15,17,18

**KNOWLEDGE BASED QUESTIONS. 50%**

1. What is ionic bond? How it is formed?
2. Describe polar covalent bond with the help of an example.
3. What is meant by co-ordinate covalent bond? Give example
4. What is metallic bond? How is it formed?
5. Difference between donor and acceptor?
6. Define Bonding electrons.
7. Difference between lone pair and bond pair of electrons.
8. Difference between polar and non-polar covalent bonds. Explain with one example of each.
9. What is relationship between electronegativity and polarity?

**UNDERSTANDING BASED QUESTIONS 35%**

1. Why does ice float on water?
2. Why HCl has dipole-dipole forces of attraction?
3. Ionic compound are solids. Justify.
4. Why has water polar covalent bonds?
5. Why a dipole develops in a molecule?

**APPLICATION BASED QUESTIONS.15%**

1. Which electrons are involved in chemical bonding?
2. Why is the BF3 electron deficient?
3. What do you mean by delta sign and why it develops?
4. Why are ionic compounds easily soluble in water?

**LONG QUESTIONS.**

1. Explain the types of covalent bonds with at least one example of each type.
2. What is a chemical bond and why do atoms form a chemical bond?
3. How is a co-ordinate covalent bond formed? Explain with example.
4. What is metallic bond? How is formed in metals?

## CHAPTER NO. 5 PHYSICAL STATES OF MATTER.

MCQ'S-1,3,4,5,6,8,9,11

**KNOWLEDGE BASED QUESTIONS. 50%**

1. Define effusion. Give an example.
2. Define Pressure and write its unit.
3. Why does diffusion take place more rapidly in gases than liquids?
4. What is the difference between diffusion and effusion?
5. Define standard atmospheric pressure. Also write its unit.
6. What is meant by mobility of gases?
7. What is pressure? Write its unit.
8. State Boyle's law. Write its mathematical equation.
9. What is the difference between systolic and systolic pressure?
10. State Charles law.
11. What is the difference between evaporation and boiling point?
12. Different between amorphous and crystalline solid.
13. Write down two causes of allotropy.
14. What is meant by allotropy? Write the allotropies of oxygen.
15. What do you mean by dynamic equilibrium?
16. Write down the use of salt to preserve meat.

**UNDERSTNDING BASED QUESTIONS.35%**

1. Why does diffusion take place more rapidly n gases than liquids?
2. Why diffusion increases as we increases temperature?
3. Evaporation causes cooling. Explain.
4. Rain drops fall down. Explain the reason.
5. Why liquid is mobile.

**APPLICATION BASED QUESTIONS. 15%**

1. Why are the gases compressible?
2. What do you mean by Pascal?
3. What is absolute zero?
4. Can you cool a gas by increasing its volume?

**LONG QUESTIONS.**

1. Define Boyle's law and verify it with an example.
2. Define and explain Charles' law of gases.
3. Differentiate between crystalline and amorphous solids.
4. How many types of solids are? Write down its properties.

## CHAPTER NO. 6 SOLUTIONS.

MCQ'S- 1,2,4,8,9,10,11,12.

**KNOWLEDGE BASED QUESTIONS.50%**

1. What is meant by solute? Give two example.
2. Differentiate between solution and aqueous solution.
3. What is difference between dilute and concentrated solutions?
4. What type of solution are fog and brass?
5. What are alloy? Give examples.
6. What do you mean by volume/volume %?
7. What do you mean by percentage volume/mass?
8. Compare solution, colloids and suspensions.
9. What do you mean, like dissolves line? Explain will example.
10. Define solubility?

**UNDERSTANDING BASED QUESTIONS.35%**

1. Why the alloys are considered solutions?.
2. Why is iodine soluble in $CCl_4$ and not in water?
3. Can colloids be separated by filtration if not why?
4. How can you justify that milk is a colloid.

**APPLICATION BASED QUESTIONS.15%**

1. Can colloids be separated by filtration, if not why?
2. Why does the colloid show tyndall effect?
3. Why does the colloids quite stable?

**LONG QUESTIONS.**

1. Differentiate between dilute and concentrated solutions with a common example.
2. What is general principle of solubility?
3. Discuss the effect of temperature on solubility.
4. Give the five characteristics of colloid.
5. Give at least five characteristics of suspension.

## CHAPTER NO. 7 ELECTROCHEMISTRY.

MCQ'S- 2,3,4,5,6,9

**KNOWLEDGE BASED QUESTIONS. 50%**

1. Define oxidation and Reduction reactions.
2. Define Oxidation State Or Oxidation Number.
3. Define oxidizing agent and Reducing agent.
4. Define Oxidation –reduction reactions.
5. What is Electrolytes?
6. Difference between Electrolytic and Galvanic cells.
7. Difference between Strong Electrolytes and weak electrolytes.
8. What is Electrolytic cell?
9. Define Galvanic cell.
10. What is Corrosion?
11. How electroplating of tin on steel is carried out?
12. Difference between Corrosion and rusting?

**UNDERSTANDING BASED QUESTIONS.35%**

1. Why the oxidation number of oxygen of OF2 is +2
2. Why are the strong electrolytes termed as good conductors?
3. Does non-electrolytes forms ions in solution?
4. What is the name of the by-product produced in the Down cell?

**APPLICATION BASED QUESTIONS. 15%.**

1. Which force drive the non-spontaneous reaction to take place?
2. In the electrolysis of water, towards which terminal H+ ions move?
3. Where does the sodium metal is collected in Downs cell?

**LONG QUESTIONS.**

1. Discuss the redox reaction taking place in the rusting of iron in detail.
2. What are electrolytes? Write its types.
3. Compare the characteristics of electrolyte and galvanic cell?
4. What is oxidation number state? Write down the rules for assigning it.
5. What a note on oxidation and reduction reactions according to the addition and removal of electrons. And explain with example.
6. What is the principle of electroplating? How is electroplating of chromium carried out?
7. Write down different methods to prevent corrosion.

## CHAPTER NO. 8 CHEMICAL REACTIVITY.

MCQ'S- 2,4,6,7,8,11

**KNOWLEDGE BASED QUESTIONS. 50%**

1. Write two chemical characteristics of metals.
2. Write down two uses of silver.
3. Difference between Alkali Metals and Alkaline Earth Metals.
4. Write down tow used of Calcium.
5. Write down uses of gold.
6. Write down the uses of Sodium metal.
7. Write down the trend of nonmetallic character in group in periods in periodic table.
8. Write the names of noble metals.

**UNDERSTANDING BASED QUESTIONS.35%**

1. Why gold is used to make jewelry?
2. Why platinum is used is motor whicles as catalyst? What is the advantages of its use?
3. Why fluorine is least non -metallic than chlorine?
4. Why sodium metal is more reactive than magnesium metal?
5. Why is silver not used in pure form?
6. Why valiancy of chlorine is 1?

**APPLICATION BASED QUESITONS. 15%**

1. What do you mean by 24 carat gold?
2. Why is platinum used for making jewelry?
3. Can liquids and gases be brittle?
4. Why is HF a weak acid?

**LONG QUESTIONS.**

1. Compare Alkali and alkaline earth metals.
2. Discuss the inert character of silver and gold.
3. Write physical properties of metal and non –metals.
4. Compare the ionization energies of alkali and alkaline earth metals.